

REMARKS

Claims 1 and 5-21 are all the claims pending in the application. Claim 21 has been newly added herewith.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 4-5 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kijima et al. (U.S. Patent No. 6,259,500). Applicant respectfully traverses this rejection.

Claim 1 sets forth a depression located in the second part of a liquid-crystal layer and is a buffer space for receiving extra liquid crystal. For example, the non-limiting embodiment of Fig. 9 teaches a buffer space 68. The present application teaches a liquid crystal display device with a uniform gap between first and second substrate. A non-uniform gap in the display region causes degradation of the image quality (*see* first full paragraph of page 7). One manner in which the present application teaches that non-uniformity can be avoided is by providing a gap in the non-display regions, as shown in the non-limiting embodiment of Fig. 9. In the non-limiting embodiment of Fig. 9, a depression is formed in the substrate 12, such that extra liquid crystal 16 is received. By receiving extra liquid crystal, the buffer space helps to ensure that the gap is uniform (*see* page 28, lines 3-13).

The Examiner asserts that interlayer insulating layer 85 constitutes a depression which receives extra liquid crystal. However, interlayer insulating layer 85 actually projects from the surface of glass substrate 11, which the Examiner identifies as a first substrate. Rather than being a buffer space for receiving extra liquid crystal, the interlayer insulating layer 85 actually takes up space such that less liquid crystal can be received in the non-display region 37. The interlayer insulating layer 85 is not a depression as claimed.

Claims 5 and 10 depend from claim 1 and are allowable at least because of their dependency.

Claim 4 has been canceled, rendering its rejection moot.

Claim Rejections - 35 U.S.C. § 103

Claims 6-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kijima in view of Miyazaki (U.S. Patent No. 5,978,061). Applicant respectfully traverses this rejection.

Claims 6-9 depend from claim 1. As stated above, Kijima fails to teach a depression in the second part of the liquid-crystal layer, corresponding to the non-display region. The alleged depression of Miyazaki, orientation film 35, is formed in the display area. Therefore, even if the orientation film 35 could be considered a depression, it still would not correct the deficiencies of Kijima with regards to claim 1.

Furthermore, Miyazaki orientation film 35 does not constitute a depression in that it is built up from the substrate. Therefore, rather than being a depression for receiving liquid crystal, it would allow less crystal to be received.

Also, with regards to claim 8, the Examiner assert that it would have been obvious for one of ordinary skill in the art to modify Kijima so that it has a depression with the height satisfying the relationship $H \geq (1/2) \times (1000 + L) \times [0.02d + [L \times (0.02d/1000)]]/L$ (μm). As stated above, Kijima fails to teach a depression which meets the recitations of claim 1, let alone the specified relationship set forth in claim 8. Additionally, Kijima fails to recognize anything regarding a depression receiving excess liquid crystal. Therefore there is no motivation to provide a depression with the claimed height, which is specified to provide a depression which best receive sexcess liquid crystal. Finally, the Examiner asserts that there is no evidence of the

advantages of the claimed expression. However, the specification clearly teaches that the claimed height (H) is advantageous because it creates a depression which can receive sufficient excess liquid crystal (*see* page 29, line 1 to page 30, line 18).

Accordingly, claims 6-9 are also allowable at least for the reasons stated above.

New Claims

Claim 21 has been newly added herewith in order to provide a more varied scope of protection. Claim 21 depends from claim 1 and is therefore allowable at least because of its dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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